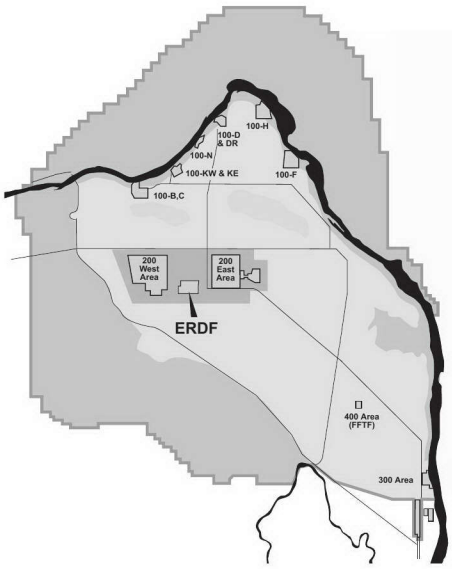

Fact Sheet

Proposed Amendment to the Environmental Restoration Disposal Facility Record of Decision

U.S. Department of Energy • U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) and U.S. Department of Energy (DOE) want your comments on the *Proposed Plan for an Amendment to the Environmental Restoration Disposal Facility Record of Decision* (Proposed Plan). The Proposed Plan presents an amendment to the Environmental Restoration Disposal Facility (ERDF) Record of Decision (ROD) that would waive a portion of a regulatory requirement in order to allow treatment of long, large, and/or heavy hazardous (LLHH) waste items to be conducted within the ERDF landfill after implementing controls to prevent releases. The Proposed Plan is accompanied by the *ERDF Risk Reduction ARAR Waiver Proposal* (WCH-611) which explains the basis for requesting the waiver.

As a landfill, ERDF is subject to regulations that require certain wastes be treated to meet applicable standards before being physically placed in the landfill. These provisions are part of the *Resource Conservation and Recovery Act* and the State of Washington Dangerous Waste Regulations (Chapter 173-303 of the *Washington Administrative Code [WAC]*) and they do not allow for the treatment of waste after placement in ERDF, even if the debris is subsequently treated within the landfill to meet the standards. At ERDF, treatment of LLHH waste items before they are placed in the landfill poses additional risks to workers and the environment.

Existing provisions of the *Resource Conservation and Recovery Act* restrict or prohibit placement of waste in a landfill prior to meeting specified treatment standards. These provisions limit the ability to place debris (for example, LLHH waste items) contaminated with hazardous waste in ERDF, even if the debris is subsequently treated in ERDF to meet the standards. The *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA) allows applicable or relevant and appropriate requirements (ARARs) associated with other environmental laws to be waived under certain circumstances. One such waiver–the CERCLA "Greater Risk to Health and the Environment" waiver–applies in situations where compliance with an ARAR would cause greater risk to human health and the environment than non-compliance. The Proposed Plan requests public input on granting an ARAR waiver that would allow LLHH waste items to be treated within the ERDF trench rather than in a unit outside of the trench. The EPA and DOE believe that treatment in the ERDF trench in accordance with the proposed waiver, with operational provisions to ensure protection of the environment prior to and during treatment, is an appropriate approach that reduces worker risk, costs less than other options, and is more protective of human health and the environment.

Background

The EPA signed the ROD authorizing the construction of ERDF in January 1995. The ROD provides the overall requirements for the design, construction, and disposal operations at the facility. The ROD has been amended five times, mostly to authorize expansion of the facility.

The facility is located in the center of the Hanford Site and includes 10 contiguous cells within the landfill disposal trench. The cells are constructed with a multiple-barrier liner system to provide an impermeable layer of protection under the waste.

Since operations began in 1996, more than 17 million tons of Hanford waste has been disposed at ERDF. Most of the material comes from waste sites, burial grounds, and demolition debris associated with the

Public Comment

The EPA and DOE want your feedback on the *Proposed Plan for an Amendment to the Environmental Restoration Disposal Facility Record of Decision.*

The public comment period is:
September 28 – October 28, 2015.

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Hanford Site's former plutonium production facilities along the Columbia River. The material includes low-level radiological, hazardous, and mixed low-level waste.

Cleanup along the River Corridor will generate at least 600,000 additional tons of waste material for disposal in the facility before the end of 2016. In addition, waste shipments from other Hanford cleanup projects are expected to increase substantially as demolition work continues at facilities in the Central Plateau area of the Hanford Site.

What is a Record of Decision?

A ROD is a decision document that explains which cleanup alternatives will be used to clean up a site under CERCLA and the reasons for their selection. The ERDF ROD addresses the disposal of radioactibe, hazardous/ dangerous, asbestos, PCB, and mixed wastes resulting from the remediation of operable units within the 100, 200, and 300 Area National Priorities List (NPL) sites of the Hanford Site.

What is the basis for the waiver?

Support for the waiver is provided in the ERDF Risk Reduction ARAR Waiver Proposal (WCH-611). This document presents detailed descriptions of the regulatory and technical aspects of the ARAR waiver. The relative risks to workers and the environment of the fully compliant method of treating hazardous debris outside of the trench vs. the proposed waiver (treatment inside the landfill) are also described in the document.

The fully compliant current method of treating hazardous debris consists of:

- Transporting and unloading the LLHH waste items in a staging area prior to treatment
- Performing additional close-up radiological surveys
- Encapsulating (four or more coatings) the LLHH waste items and repositioning the LLHH waste items multiple times (4-10 crane lifts) to complete the encapsulation
- Inspection and touching up the coating
- Reloading and transporting the encapsulated LLHH waste items into the trench for disposal
- Inspection and coating touch-up
- Final coating inspections (this inspection can lead to additional coating touch-up)

In-Trench Treatment (preferred alternative)

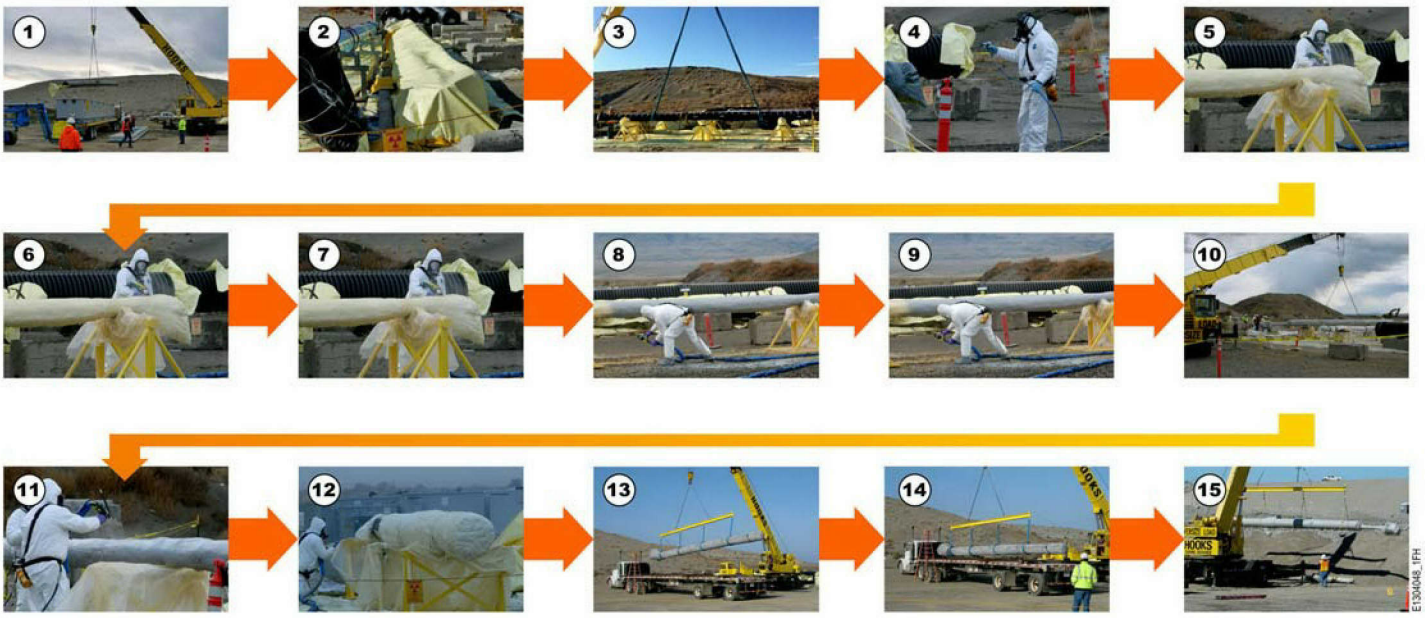
In-Trench Treatment:

- Reduces risks to environment
- Reduces radiological and industrial risks to workers (ALARA)
- Proven to be safe and efficient
- Reduces disposal costs

Out-of-Trench Treatment:

- Increases risk to environment and workers
  - Significantly increases radiological exposure
  - Significantly increases industrial risks
  - Significantly increases chemical risks
- Increases treatment-to-disposal timeframe
- Increases disposal costs

Out-of-Trench Treatment (no-action alternative)



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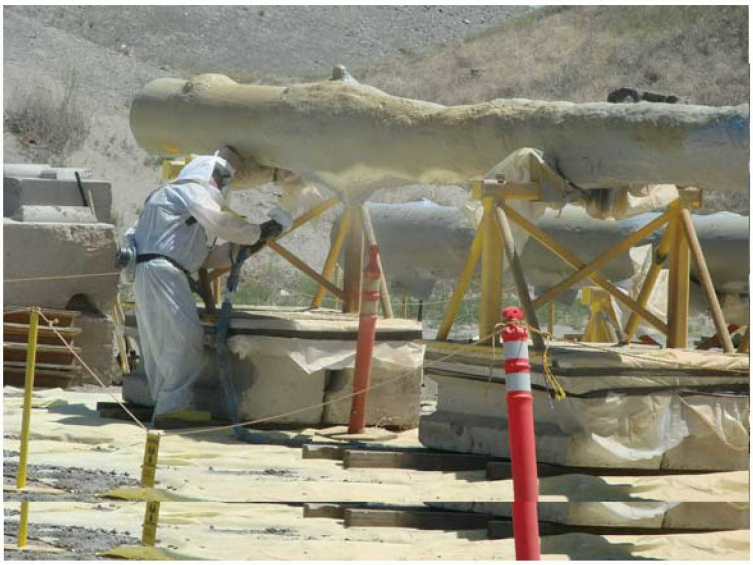
This compliant treatment method requires multiple handling activities by workers in close proximity to the LLHH waste items and increases the workers' exposure to direct radiation and radiological contamination, as well as chemical and physical hazards from the coatings during their application. The increase in worker exposure to direct radiation and radiologically contaminated LLHH waste items is not consistent with the key tenets of the as low as reasonably achievable (ALARA) principle. The multiple handling activities and treatment process also significantly increases the cost of LLHH waste items treatment and disposal.

The current method meets the standard of the protection of human health and the environment; however, it has an increased risk of physical, chemical, or radiological harm to the workers compared to treatment in the landfill as described in the waiver. The risk of the spread of chemical and radiological contamination to the environment is also increased.



Polyurea is applied to a slurry pump as part of the macroencapsulation process at ERDF.

The waiver would authorize the treatment of LLHH waste items within the ERDF landfill trench. Treating within the trench achieves an equal or better degree of environmental protection, i.e. isolating hazardous waste from the environment. This method follows the key tenets of the ALARA principle, thereby minimizing the workers' exposure to direct radiation and radiologically contaminated LLHH waste items, as well as chemical and physical hazards from the coatings during their application.

What is ALARA?

ALARA is an acronym for As Low As Reasonably Achievable. It is a radiation safety principle for minimizing radiation doses and releases of radioactive materials by employing all reasonable methods.

The in-trench method intrinsically follows the key tenets of ALARA radiation control by minimizing time near radioactive objects while at the same time maximizing the distance to the objects.

By treating LLHH waste items in-trench, ERDF workers will be able to significantly increase the distance between themselves and the debris waste, reduce their exposure time, and decrease the potential for package breach, reducing their exposure to radiological dose and/or contamination thus fulfilling the key tenets of ALARA.

This waiver allows a greater portion of the LLHH waste items to be encapsulated with grout and reduces worker exposure to the hazardous chemical encapsulation materials, which are currently being used to treat LLHH waste items outside of the trench. The treatment of LLHH waste items within the disposal trench is also the most cost-effective method at the ERDF. Since this option takes place within the double-lined trench, the risk to the environment is greatly reduced. In-trench treatment meets the standard of the protection of human health and the environment.

Based on the advantages of treating wastes inside the landfill, the DOE and EPA are proposing the treatment of LLHH waste items within the ERDF trench. This option minimizes LLHH waste item handling to a single off-loading operation during which workers can maintain a safe distance from the LLHH waste items, nearly eliminating radiological, chemical, and physical hazards. After being placed, but before disposal, the waste is encapsulated with cementitious grout.

What is the State of Washington's role in this decision?

The State of Washington concurs with the selection of the preferred alternative. "State Acceptance" is one of nine criteria for making CERCLA decisions. The preferred alternative would waive a state regulation, WAC 173-303-140(3)(b), that is a definition for "Land disposal."

How can you get involved?

You can provide your input during the 30-day public comment period on the proposed amendment to the ERDF ROD from September 28, 2015 – October 28, 2015.

By submitting your input, you can let the Tri-Party agencies know whether or not you support the preferred alternative and provide any other input you feel is important. The Tri-Party agencies will consider all comments before finalizing the decision in the ROD amendment. For more information or to submit comments by October 28, 2015, email: Kristen.Skopeck@rl.doe.gov

If you have questions, please contact Kristen Skopeck on or before October 28, 2015. The proposed plan is available at http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0080164H.

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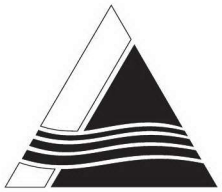

Tri-Party Agreement
U.S. Department of Energy
U.S. Environmental Protection Agency
Washington State Department of Ecology

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